Extraflame®
Riscaldamento a Pellet

LP14 - LP20 - LP30
USER MANUAL

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1. WARNINGS

Installation must be carried out by qualified staff and/or manufacturer technical assistance, who must provide the buyer with a declaration of conformity for the system and will assume full responsibility for final installation and as a consequence the correct functioning of the installed product. It is necessary to bear in mind all laws and national, regional, provincial and town council Standards present in the country the appliance has been installed. The manufacturer cannot be held responsible for the failure to comply with such precautions.

1.Electric connections: it is therefore recommended that after any intervention on the product, that authorised staff pay particular attention to the electric connections, especially the stripped parts of the wires. These must not escape from the terminal board in any situation, thus preventing possible contact with the live parts of the wire.
2. Type of use: this stove must be destined for the use for which it has been expressly realised.
3.Liability of the manufacturer: The manufacturer is exempt from any liability, contractual and extracontractual, for injury/ damage caused to persons/animals and objects, due to installation, adjustment and maintenance errors and improper use.
4.Check integrity of the product: After the packaging has been removed, check the integrity and completeness of the contents. If this does not comply, contact the dealer where the appliance was purchased.
5.Electric connections: All electric components that make up the stove must be replaced with original spare parts exclusively by an authorised after-sales centre, thus guaranteeing correct functioning.
6.Maintenance: The stove must be serviced at least once a year, programming it in advance with qualified staff and/or the manufacturer's technical after-sales assistance. **Nota bene: In case of thermo product or boiler, the product or system venting is not covered by the warranty.**

2. SAFETY

For safety reasons, remember that:

- ❖ The stove must not be used by persons (including children) with reduced physical, sensorial and mental capacities or who are unskilled persons, unless they are supervised and trained regarding use of the appliance by a person responsible for their safety.
- ❖ Children must be controlled to ensure that they do not play with the appliance.
- ❖ Do not touch the stove when you are barefoot or when parts of the body are wet or humid.
- ❖ The safety and adjustment devices must not be modified without the authorisation or indications of the manufacturer.
- ❖ Do not pull, disconnect, twist electric cables leaving the stove, even if disconnected from the electric power supply mains.
- ❖ It is advised to position the power supply cable in a way that it does not come into contact with hot parts of the appliance.
- ❖ The power supply plug must be accessible after installation.
- ❖ Do not close or reduce the dimensions of the airing vents in the place of installation. The airing vents are indispensable for correct combustion.
- ❖ Do not leave the packaging elements within reach of children or unassisted disabled persons.
- ❖ The hearth door must always be closed during normal functioning of the product.
- ❖ When the appliance is functioning and hot to the touch, especially all external surfaces, attention must be paid
- ❖ Check for the presence of any obstructions before switching the appliance on following a prolonged standstill period.
- ❖ The stove has been designed to function in any climatic condition (also critical). In particularly adverse conditions (strong wind, freezing) safety systems may intervene that switch the stove off. If this occurs, contact the technical after-sales service and always disable the safety system.
- ❖ If the flue should catch fire, be equipped with suitable systems for suffocating the flames or request help from the fire service.
- ❖ This appliance must not be used to burn waste
- ❖ Do not use any inflammable liquids for ignition
- ❖ During the filling phase do not allow the bag of pellets to come into contact with the product

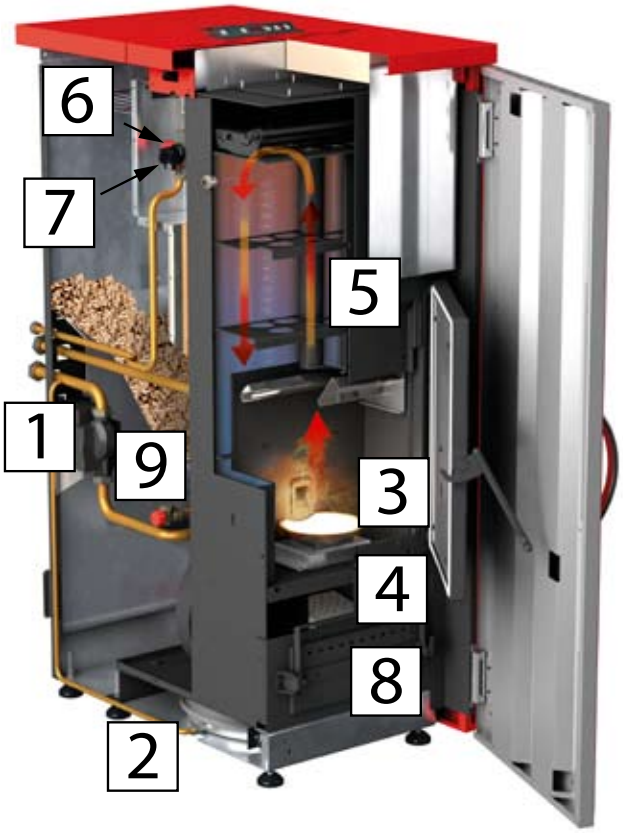
3. TECHNICAL FEATURES

Features		LP 14	LP 20	LP 30
Weight	kg	220	260	333
Height	mm	1327	1368	1406
Width	mm	533	525	875
Depth	mm	663	941	772
Flue exhaust pipe diameter	mm	120	120	120
Air intake pipe diameter	mm	60	60	60
Max. global heat output	kW	15.3	22.0	33.8
Max. useful heat output (to the water)	kW	14.0	21.0	31.1
Minimum global heat output	kW	4.3	4.4	10
Min. useful heat output	kW	3.9	4.2	8.6
Max. hourly fuel consumption	kg/h	3.3	4.7	7.0
Min. hourly fuel consumption	kg/h	1.0	1.0	2.0
Tank volume	l	~ 61	~ 100	~ 121
Recommended flue draught	mbar	~ 0.1	~ 0.1	~ 0.1
Nominal electric output	W	470	470	470
Nominal voltage	Vac	230	230	230
Nominal frequency	Hz	50	50	50
Water inlet/outlet pipe diameter	"	1	1	1
Automatic exhaust pipe diameter	"	1/2	1/2	1/2
Pump head	m	5	5	5
Max. working water pressure accepted	bar	2.5	2.5	2.5
Min. working water pressure accepted	bar	0.6	0.6	0.6
Flue gas temperature	°C	54.8 - 63.7	44.2 - 73.3	69.8 - 105.9
Flue gas flow rate	g/s	6.4 - 13.3	5 - 12.1	7.7 - 15.3
Boiler class		3	3	3
Combustion period	h	43 - 13	70 - 15	42 - 12
Water thermostat field of regulation	°C	65 - 80	65 - 80	65 - 80
Water return minimum temperature	°C	55	55	55
Dimensions of the feeding door	mm	286 L x 225 D	370 L x 360 D	576 L x 236 D
Yield	%	91.5	94.6	92.0

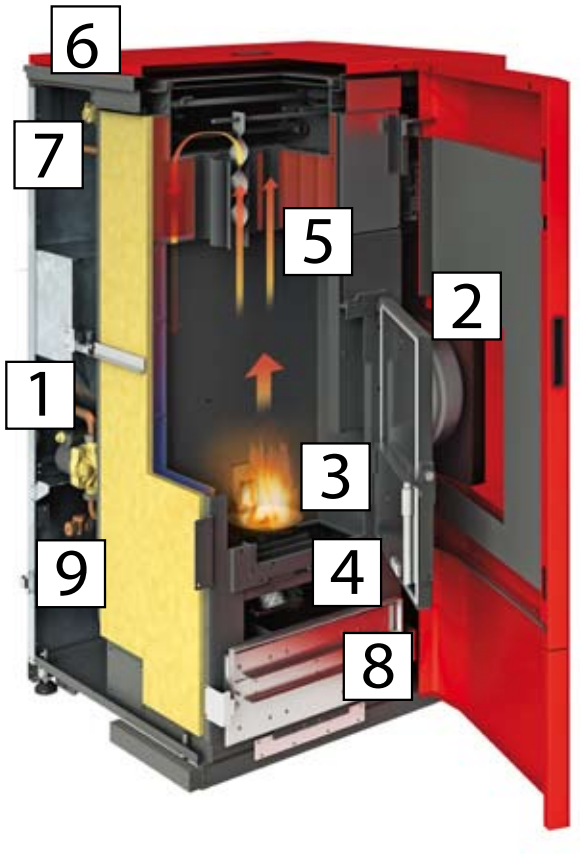
Appliance	LP14	Flow of water (kg/h)	Water side resistance (mbar)
Corresponding temperature difference	△T = 10K	1223.5	21.3
	△T = 20K	611.7	7.9

Appliance	LP20	Flow of water (kg/h)	Water side resistance (mbar)
Corresponding temperature difference	△T = 10K	1835,4	25.4
	△T = 20K	917.7	8.5

Appliance	LP30	Flow of water (kg/h)	Water side resistance (mbar)
Corresponding temperature difference	△T = 10K	2751.6	148
	△T = 20K	1375.8	74



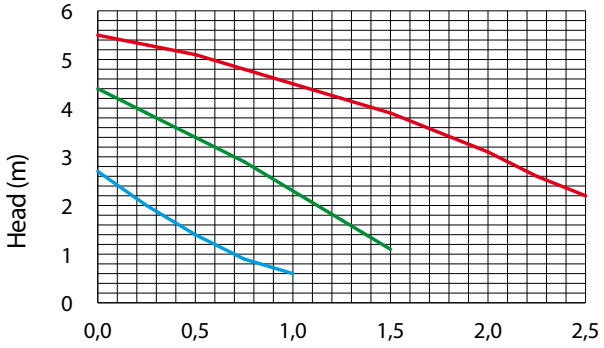
LP14_20



LP30

		LP14_20	LP30
1	Pump integrated in the thermo product with 5 m head	yes	yes
2	Volume of expansion vessel integrated into thermo-product (l)	6	12
3	Burn pot		
4	Automatic cleaning mechanism	yes	yes
5	Shell and tube turbulator cleaning	yes	yes
6	3 bar safety valve integrated into the thermo-product	yes	yes
7	Minimum and maximum pressure switch integrated into the thermo-product	yes	yes
8	Ash drawer	yes	yes
9	Load/unload cock	yes	yes
Heat exchanger water content (l)		32	66

The graphics given below illustrate the behaviour of the pump used on our thermo-products at the speeds that can be set.



Tests performed using wooden pellets as fuel, certified according to ONORM M7135 DIN PLUS.
The data given above is indicative and not binding. The manufacturer reserves the right to make any modifications in order to improve product performance.

4. SAFETY DEVICES

Circuit board: intervenes directly by sending the product into alarm conditions until complete cooling, in the case of: breakage of flue gas motor, pellet feed motor breakage, black out (if more than 10 seconds), no ignition	*
Door micro switch: With the door open, the burn pot system functioning is blocked	*
Flow sensor: in the event of inadequate air flow, it takes the machine to alarm conditions	-
2.5 A fuse: they protect the machine from overcurrents	2.5 A 250V F (rapid)
85°C calibrated mechanical bulb with manual rearm: intervenes by blocking fuel feed whenever the pellet tank t° reaches the limit of 85°C. **Rearm must be performed by qualified staff and/or the manufacturer's technical after-sales assistance.**	*
100°C calibrated mechanical bulb with manual rearm: intervenes by blocking the fuel feed whenever the t° of the water inside the product is near to 100°. **Rearm must be performed after the boiler has cooled completely**	*
Minimum and maximum pressure switch: intervenes in the event of inadequate water pressure. **Rearm must be performed by qualified staff and/or the manufacturer's technical after-sales assistance.**	*

TABLE OF SAFETY DEVICES FOR CLOSED VESSEL SYSTEM AND NOT PRESENT IN THE PRODUCT	
Safety valve	*
Pump control thermostat	*
Temperature indicator	*
Acoustic alarm activation thermostat	-
Adjustment automatic circuit breaker switch (firmware board)	*
Water overheating automatic circuit breaker switch (block thermostat)	*
Circulation system	*
Expansion system	*
Safety dissipation system incorporated with the generator with thermal safety valve (self-activated), whenever the appliance does not have a temperature self-adjustment system: Not necessary as the machine has a t° self-adjusting system and a block automatic circuit breaker switch.	

During installation of the stove it is MANDATORY to adjust the system with a manometer in order to display the water pressure.

4.1. INSTALLATION AND SAFETY DEVICES

The installation, relative system connections, commissioning and inspection of correct functioning must be carried out perfectly, in total compliance with Standards in force, both national, regional and municipal, as well as these instructions.
For Italy, installation must be carried out by professionally authorised staff (Ministerial Decree dated 22.01.08 n°37).
Extraflame S.p.A. declines all responsibility for damages to objects and/or persons caused by the system.

4.2. SAFETY DEVICES FOR CLOSED VESSEL SYSTEM

According to the UNI 10412-2 (2006) Standard in force in Italy, the closed systems must have: safety valve, pump control thermostat, acoustic alarm activation thermostat, temperature indicator, pressure indicator, acoustic alarm, regulation automatic circuit breaker switch, automatic circuit breaker block switch (block thermostat), circulation system, expansion system, safety dissipation system incorporated with the generator with thermal safety valve (self-activated), whenever the appliance does not have a temperature self-adjustment system.

4.3. DISTANCES OF SAFETY DEVICES ACCORDING TO THE STANDARD

Component	Distance
Temperature safety sensors	On the machine or not exceeding 30 cm
Missing devices because not as per standard	Not exceeding one metre, on the flow pipe

The temperature safety sensors must be in place on the machine at a distance no greater than 30 cm from the flow connection. Whenever the generators lack a device, those missing can be installed on the generator flow pipe, within a distance no greater than 1m from the machine. The domestic heating appliances with automatic feeding must be supplied with a fuel block thermostat or be supplied with a cooling circuit set-up by the appliance manufacturer.
The cooling circuit must be activated by a heat safety valve such to guarantee that the limit temperature set by the Standard is not exceeded.
Connection between the power supply unit and the valve must be free from interceptions.
The pressure upstream from the cooling circuit must be at least 1.5 bar.
ATTENTION! THE COMFORT IDRO MODEL DOES NOT HAVE EXPANSION VESSEL AND PUMP AS PER STANDARD

5. HYDRAULIC SYSTEM

Certain concepts referring to the Italian UNI 10412-2 (2006) Standard are described in this chapter. As previously described, when installing, all national, regional, provincial and town council Standards in force provided by the country in which the appliance has been installed must be complied with.

TYPE OF SYSTEM

There are two different types of system: open vessel system and closed vessel system. The product has been designed and realised to work with closed vessel systems.

CLOSED VESSEL SYSTEM FOR AUTOMATIC LOADING APPLIANCES

System in which the water it contains is not in direct or indirect communication with the atmosphere. Generally, the closed vessel system has one of the following expansion vessels:

- ❖ Pre-loaded closed expansion vessel with membrane impermeable to the passage of gases.
- ❖ Automatic closed expansion system with compressor and membrane impermeable to the passage of gases.
- ❖ Automatic closed expansion system with transfer pump and membrane impermeable to the passage of gases.
- ❖ Expansion system without diaphragm.

GENERALITY

The closed systems must have:

- ❖ Safety valve
- ❖ Pump control thermostat
- ❖ Acoustic alarm activation thermostat
- ❖ Temperature indicator
- ❖ Pressure indicator
- ❖ Acoustic alarm
- ❖ Adjustment automatic circuit breaker switch
- ❖ Automatic circuit breaker switch (block thermostat)
- ❖ Circulation system
- ❖ Expansion system
- ❖ Safety dissipation system incorporated with the generator with thermal safety valve (self-activated), whenever the appliance does not have a temperature self-adjustment system

The temperature safety sensors must be in place on the machine at a distance no greater than 30 cm from the flow connection. Whenever the generators lack a device, those missing can be installed on the generator flow pipe, within a distance no greater than 1m from the machine. Domestic type heating appliances with automatic feed must have a fuel block thermostat or a cooling circuit prepared by the manufacturer of the appliance, activated by a circuit breaker safety valve such as to guarantee that the limit temperature set by the Standard is not exceeded. Connection between the power supply unit and the valve must be free from interceptions. The pressure upstream from the cooling circuit must be at least 1.5 bar.

Safety valves

The load capacity of the safety valve must allow the discharge of a quantity of vapour, not lower than: Q / 0.58 [kg/h] where: Q is the useful outlet power to the generator water expressed in kilowatt. The diameter of the minimum net transversal section of the valve inlet must not be lower than 15 mm. The valve load pressure, equal to the calibration pressure, increased by the overpressure, cannot exceed the maximum exercise pressure of the heat generator. The designer must check that the maximum pressure existing in every point of the system, does not exceed the maximum exercise pressure of its every component. The safety valve must be connected to the highest part of the heat generator or outlet pipes, immediately near the generator. The length of the pipes route included between the attachment to the generator and the safety valve must not be higher than 1 m. The connection piping of the safety valve to the heat generator must not be traceable and must not present, in any point, section lower to the inlet of the safety valve or the sum of the inlet sections in case of more valves under the individual pipe. The discharge piping of the safety valve must be realised in order not to prevent the regular functioning of the valves and not to cause damages to persons; the discharge must flow immediately near the safety valve and be accessible and visible. The diameter of the discharge piping must not however be lower than that of the outlet connection of the safety valve. For diameter of outlet connection it is intended the minimum internal diameter on the valve outlet upstream of the eventual internal threading.

Closed expansion vessel

The vessel maximum exercise pressure must not be lower than the calibration pressure of the safety valve, increased by overpressures, characteristic of the same valve, bearing in mind the eventual level difference between vessel and valve and the pressure generated by the functioning of the pump. The capacity of the expansion vessel/s is evaluated depending on the total system capacity as results from the project. The closed expansion vessels must comply with the dispositions regarding the planning, manufacturing, evaluation of conformity and use for pressure appliances. Intercepting objects or section decreases must be inserted/ practiced on the connection piping, which can be constituted by system portions. The insertion of a three-way intercepting valve which allows connection between the vessel and the atmosphere for maintenance operations, is allowed. Such device must be protected against accidental manoeuvres. The connection pipe must be realised in order not to present scales or deposits storage points. In case of more heat generators which feed the same plant or the same secondary circuit, each heat generator must be connected directly to the expansion vessel or plant expansion vessels unit, altogether dimensioned for the total volume of water contained in the same plant or the same independent circuit. Where it is necessary to separate the individual heat generator from the expansion vessel or expansion vessels unit, a three-way tap must be applied on the connection piping between the generator and the vessel, in order to ensure, in every position, the connection of the generator with the expansion vessel or with the atmosphere. The expansion vessels, the connecting pipes, the bleed pipes and drain pipes must be protected from freezing, where this phenomenon occurs. The solution used for this purpose is described in the design.

Commissioning checks

Before connecting the boiler:
a) wash all system piping in order to remove any residues which might compromise the correct functioning of certain system components (pumps, valves, etc.).
b) check to verify that the flue has adequate draft, is not narrowed and that other appliances do not discharge into the flue.
This is to prevent unexpected power increases. Only after this control can the chimney fitting between the boiler and flue be mounted. It is recommended to control the fittings with pre-existing flues.

Feeding water features

The chemical-physical features of the system and reinstate water are fundamental for the correct functioning and life-span of the boiler.
Amongst the inconveniences caused by bad quality feeding water, the most frequent is the scaling of the heat exchange surfaces.
Less frequent, but equally serious, is the corrosion of the water side surfaces of the entire circuit.
It is known that the lime scale, even if there is only a few millimetres, due to their low thermal conductivity, greatly reduce the heat exchange, determining damaging localised heating. It is strongly recommended to treat the water in the following cases:
a) very hard water available (higher than 20°f)
b) very extended systems
c) large water quantities restored due to leaks
d) subsequent fillings due to system maintenance work
It is recommended to always contact specialised companies to treat the feeding water of the heating systems.

Filling the system

Once the hydraulic connections have been carried out, proceed to connecting the plant.
Open all air venting valves of radiators, boiler and plant.
Gradually open the load cock ensuring that the air venting valves work regularly. Using the manometer, check that the system is pressurised. In case of closed vessel system, reach the pressure of about 0.11 – 0.12 MPa (1.1 – 1.2 bar). Close the load cock and again release the air from the boiler through the venting valve.

6. AUTOMATIC THERMOSTATIC MIXER VALVE (MANDATORY)

The automatic thermostatic mixing valve finds applications in solid fuel boilers as it prevents cold water return into the exchanger. Routes 1 and 3 are always open and, together with the pump installed on the return, they guarantee water circulation inside the biomass boiler exchanger. An elevated return temperature, allows efficiency improvement, reduces formation of combustion product condensation and prolongs the boiler life span.
Valves on the market have different calibrations. The company advises use of 55°C model with 1" hydraulic connections. Once the valve calibration temperature is reached, route 2 is opened and the boiler water goes to the system via the flow.
It is recommended not to use this device whenever the DHW is produced through an instant heat exchanger.

7. INSTALLATION

The installation must be in compliance with:

- **UNI 10683 (2005) heat generators fed with wood and other solid fuels: installation.**

The chimneys must be in compliance with:

- *UNI 9731 (1990) chimneys: classification based on thermal resistance.*
- *EN 13384-1 (2006) Thermal and fluid dynamic calculation methods.*
- *UNI 7129 point 4.3.3 Fire Department dispositions, local rules and prescriptions.*
- *UNI 1443 (2005) chimneys: general requisites.*
- *UNI 1457 (2004) chimneys: clay/ceramic flue liners.*
- *UNI 11278 chimneys/smoke channels/pipes/flues/metal pipes. Selection and correct use depending on the type of application and relative designation of the product.*

GLOSSARY

CLOSED HEARTH APPLIANCE
Heat generator which opening is only allowed through the loading of the fuel during use.

BIOMASS
Biological material, excluding the material incorporated in geological formations and transformed into fossils.

BIOFUEL
Fuel produced directly or indirectly by biomass.

CHIMNEY
Vertical pipe with the aim of collecting and expelling the fuel products coming from only one appliance, at a convenient height from the ground.

SMOKE CHANNEL OR FITTING
Pipe or connecting element between heat generator appliance and chimney to evacuate combustion products.

INSULATION
Group of set-ups and materials used to prevent the transmission of heat through a wall that separates rooms with different temperatures.

CHIMNEY CAP
Device positioned at chimney peak to ease the dispersion of combustion products into the atmosphere.

CONDENSATE
Liquid products that form when the combustion gas temperature is lower or equal to the water dew point.

HEAT GENERATORS
Appliance which allows to produce thermal energy (heat) through the rapid transformation, via combustion, of the chemical energy of the same fuel.

GATE VALVE
Mechanism for modifying the combustion gas dynamic resistance.

COMBUSTION PRODUCT EVACUATION SYSTEMS
Flue gas exhaust system independent from the appliance constituted by a fitting or smoke channel, chimney or individual flue and chimney cap.

FORCED DRAUGHT
Air circulation by means of the fan activated by electric motor.

NATURAL DRAUGHT
Draught which determines in a chimney/flue for effect of the volume mass difference existing between smoke (hot) and surrounding atmosphere air, without any mechanical intake aid installed inside it or at its peak.

RADIATION AREA
Area immediately near the hearth in which the heat caused by combustion is diffused, where there must be no combustion materials .

REFLUX AREA
Area where leaking of the combustion products is verified from the appliance towards the installation room.

The installation must be preceded by checking the chimneys, flues or unload terminals positioning of appliances similarly to:

- Installation prohibitions
- Legal distances
- Limitations disposed by local administrative regulations or particular authority prescriptions.
- Conventional limitations deriving from condominium regulations, constraints or contracts.

7.1. INSTALLATIONS ALLOWED

Only appliances working softly respect to the room or which do not place the room in depression respect to the external environment, can exist or be installed in the room where the heat generator will be installed.
Appliances for cooking food and relative hoods without extractor are only allowed in kitchens.

7.2. INSTALLATIONS NOT ALLOWED

In the room where the heat generator will be installed the following must not pre-exist or be installed:

- ❖ hoods with extractor
- ❖ collective type ventilation pipes.

Should these appliances be in rooms adjacent, communicating with the installation room, the simultaneous use of the heat generator is forbidden, where a risk exists of one of the two rooms being placed in depression respect to the other.

7.3. CONNECTION TO THE SMOKE EVACUATION SYSTEM

UNI 10683 (2005) Standard

7.3.1. SMOKE CHANNEL OR FITTINGS

To mount the smoke channels, non-flammable elements will have to be used, ideal for resisting combustion products and their eventual condensing.
The use of flexible metal and asbestos cement pipes to connect the appliances to the flue is forbidden, even for pre-existing smoke channels.
There must be continuity between the smoke channel and the flue so that the flue does not lean on the generator. The smoke channels must not cross rooms where the installation of the combustion appliances is not allowed.
The mounting of the smoke channels must be carried out in order to guarantee smoke seal for the appliance functioning conditions, limit the forming of condensate and avoid it being transported towards the appliance.
The mounting of horizontal routes must be avoided.
For appliances where ceiling or wall non-coaxial discharges with respect to the appliance combustion product outlet have to be reached, the direction changes will have to realised using open elbows not greater than 45° (see figures below).
For the heat generator appliances equipped with electric fan for expelling combustion products, the instructions below must be followed:

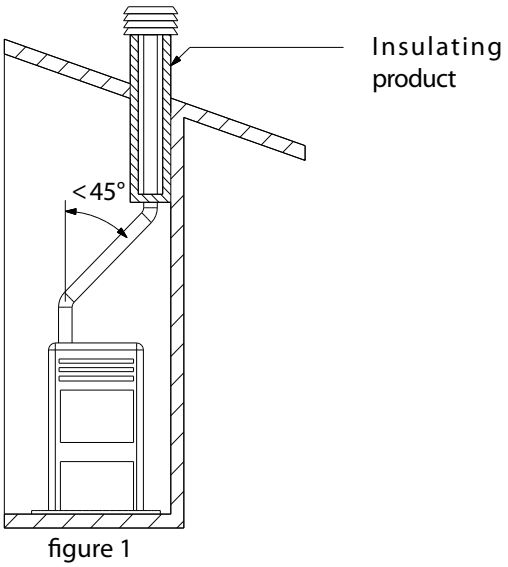


figure 1

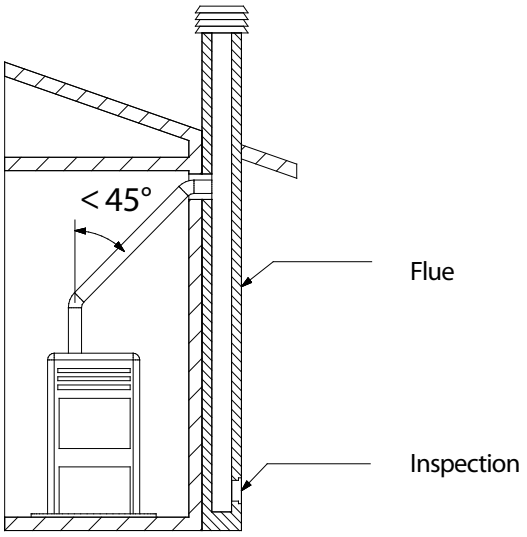


figure 2

- ❖ The horizontal routes will have to have a minimum upward slope of 3%
- ❖ The length of the horizontal route must be minimal and, however, not longer than 3 metres
- ❖ The number of direction changes including the one for effect of using the "T" element must not be more than 4 (if 4 bends are used, use double wall piping with an internal diameter of 120 mm).

In any case, the smoke channels must seal the combustion and condensate products and be insulated if they pass outside the installation room.
The use of counterslope elements is forbidden.
The smoke channel must allow the recovery of soot or be brushable.
The smoke channel must have constant section. Any section changes are only allowed at the flue coupling.
It is forbidden to have other air supply channels and pipes for plant engineering, especially if over-sized, transit inside the smoke channels. The mounting of manual draught adjustment devices on forced draught appliances is forbidden.

7.3.2. CHIMNEY OR INDIVIDUAL FLUE

The chimney or individual flue must respond to the following requisites:

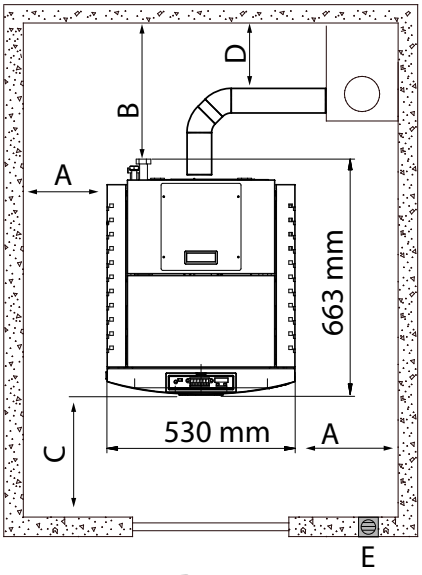
- ❖ seal the combustion products, be waterproof and adequately insulated in line with the use conditions;
- ❖ be realised with materials which resist the normal mechanical stress, heat, action of the combustion products and any condensate;
- ❖ have mainly vertical progress with deviations from the axis not greater than 45°;
- ❖ be adequately distanced from fuel or flammable materials through air space or opportune insulation;
- ❖ have preferably circular internal section: the square or rectangular sections must have round corners with a radius not lower than 20 mm;
- ❖ have constant internal section, free and independent;
- ❖ have rectangular section with max. ratio between the sides of 1.5.

It is recommended that the smoke pipe be equipped with a collection chamber for solid materials and any condensate situated

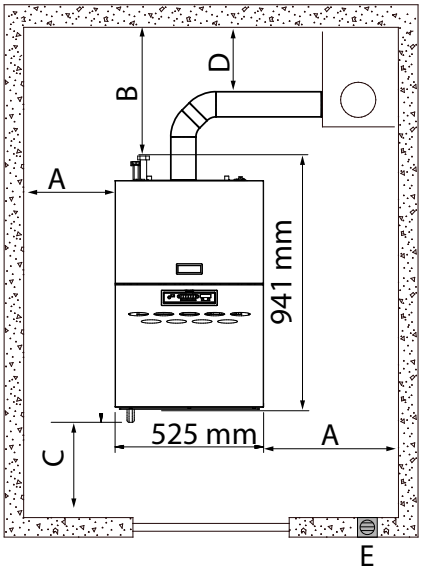
under the smoke channel inlet, so that it can be easily opened and inspected from airtight door.

7.3.3. DISTANCES RECOMMENDED FOR BOILER COMPARTMENT

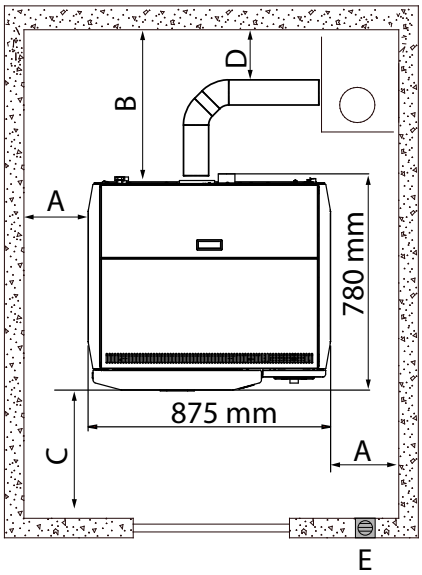
Below find images relative to the measurements that the company recommends are respected.



LP14
figure 3



LP20
figure 4



LP30
figure 5

REFERENCES	Non-inflammable objects
A	500 mm
B	1,000 mm
C	1,000mm
D	300 mm
E	> 80 cm²

7.3.4. APPLIANCE CONNECTION TO THE FLUE AND FUEL PRODUCTS EVACUATION

The flue must receive the discharge from only one heat generator.
The direct discharge towards closed spaces is forbidden, even with clear sky.
The direct discharge of the fuel products must be at roof and the smoke pipe must have the features provided in the "Chimney or individual flue" section.

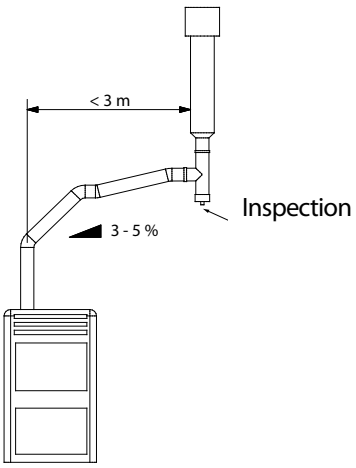


figure 6

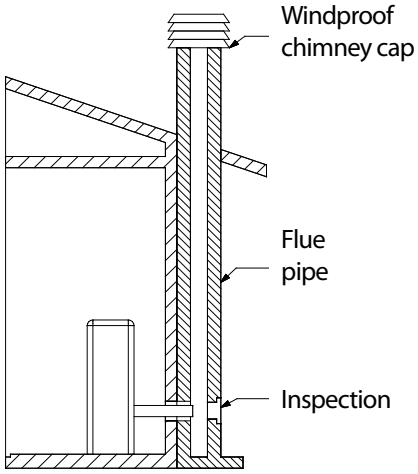


figure 7

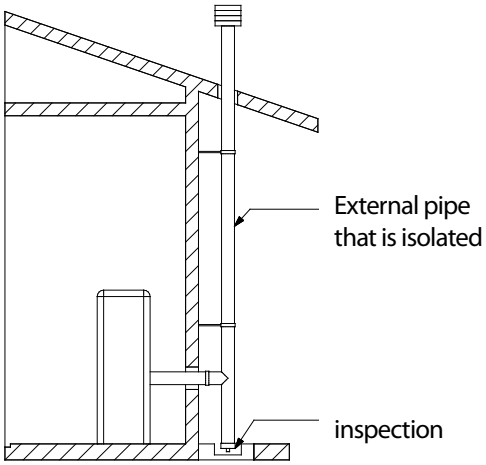


figure 8

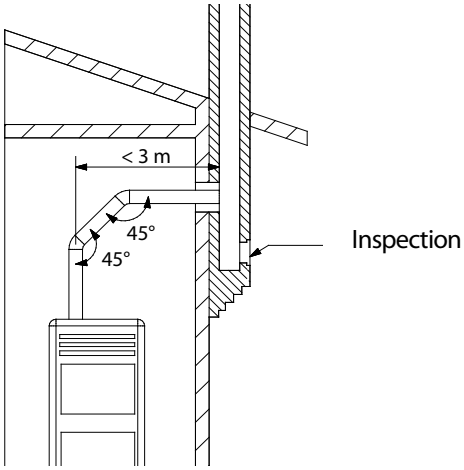


figure 9

7.3.5. CHIMNEY CAP

The chimney cap must comply with the following requisites:

- ❖ have an internal section equivalent to that of the chimney;
- ❖ have useful outlet section not lower than double the chimney internal section;
- ❖ be built in order to avoid rain, snow, foreign bodies penetrating the chimney and so that, in the event of winds in any direction and inclination, the discharge of the fuel products is assured.
- ❖ be positioned in a way to guarantee an adequate dispersion and dilution of the combustion products and, however, outside the reflux area in which the formation of counterpressures occurs. Such area has different dimensions and configuration depending on the covering inclination angle. It is therefore necessary to adopt the minimum heights indicated in the figure layouts below.
- ❖ The chimney cap must not have mechanical intake means.

FLAT ROOF

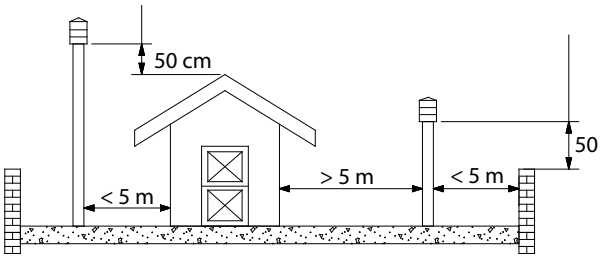
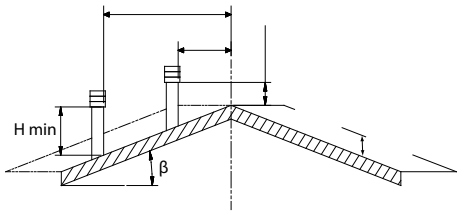


figure 10

SLOPING ROOF



Z=REFLUX AREA
figure 11

CHIMNEY CAPS, DISTANCES AND POSITIONING		
Roof inclination	**Distance between the ridge and the chimney**	**Minimum chimney height (measured from outlet)**
β	**A (m)**	**H (m)**
15°	< 1,85	0.50 m over the ridge
	> 1,85	1.00 m from roof
30°	< 1,50	0.50 m over the ridge
	> 1,50	1.30 m from roof
45°	< 1,30	0.50 m over the ridge
	> 1,30	2.00 m from roof
60°	< 1,20	0.50 m over the ridge
	> 1,20	2.60 m from roof

7.4. CONNECTION TO EXTERNAL AIR INLETS

The appliance must be able to use the necessary air to guarantee regular functioning through external air inlet. The air inlets must comply with the following requisites:

- ❖ have a total free section of at least 80 cm^2.
- ❖ must be protected by grates, metal net or suitable protections as long as they do not reduce the minimum section stated in the previous point and positioned in order to avoid them being obstructed.

If the combustion agent air is withdrawn directly from outside through a pipe, a downward bend must be mounted outside or a protection against the wind and no grates or similar must be positioned, (it is recommended that the air vent always communicates directly with the installation room even if the air is withdrawn from outside through a pipe). The air flow can also be obtained from an adjacent room, as long as the flow takes place

freely through permanent openings communicating with the outside.
The adjacent room, with respect to the installation room, must not be put in depression with respect to the external environment by means of reverse draught caused by the presence of another used appliance or intake device in such room. The permanent openings in the adjacent room must comply with the above-described requisites. The adjacent room cannot be set up as garage, storage for combustion material or activity with danger of fire.

7.5. INSULATION, FINISHINGS, COVERING AND SAFETY RECOMMENDATIONS

The coverings, independently from the materials from which they are made, must constitute a self-supporting construction with respect to the heating block and not be in contact with it.
The cross members and finishings in wood or combustion materials must be positioned outside the hearth radiation area or adequately insulated.
If coverings in combustion material or sensitive to heat exist in the space above the generator, an insulating and non combustible protection diaphragm must be inserted.
Elements in combustible or inflammable material like wooden furniture, curtains, etc., directly exposed to the hearth radiation, must be positioned at a safe distance. The appliance installation must guarantee easy access for cleaning the appliance itself, discharge gas pipe and flue.

7.6. NATIONAL, REGIONAL, PROVINCIAL AND TOWN COUNCIL REGULATIONS

It is necessary to bear in mind all laws and national, regional, provincial and town council Standards present in the country the appliance has been installed.

8. PELLETS AND FEEDING

The pellets used must comply with the features described by the Standard:

- Ö-Norm M 7135
- DIN plus 51731
- UNI CEN/TS 14961

Extraflame recommends the use of pellets with a diameter of 6mm with its products.

WARNINGS!!!

THE USE OF EXPIRED PELLETS OR ANY OTHER MATERIAL DAMAGES THE FUNCTIONS OF YOUR STOVE AND CAN DETERMINE THE INVALIDITY OF THE WARRANTY AND THE ANNEXED RESPONSIBILITY OF THE MANUFACTURER.

To guarantee combustion without problems, the pellets must be kept in a dry place. We recommend the use of pellets with diameter of 6mm with our products. See the images for feeding pellets.
Open the tank lid and load the pellets using a scoop. In the event of the inserts, only load when the machine is off and cold, by extracting it from the compartment. In the event of installation with feeding kit (optional) the machine must not be extracted.

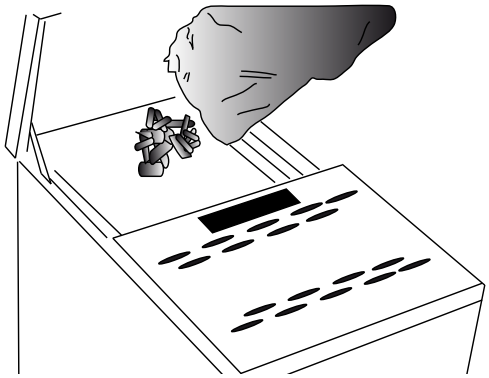


figure 12

9. PRODUCT FUNCTIONALITY

9.1. CONTROL BOARD

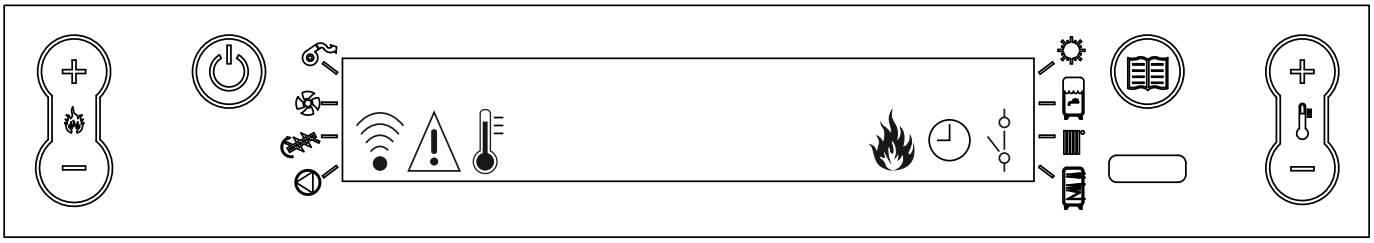


figure 13

⇨ ON/OFF BUTTON

⇨ REGULATION OF FUNCTIONING POWER

⇨SETTING H2O TEMPERATURE

⇨ KEY TO ACCESS THE MENU

9.2. DISPLAY ICONS KEY

	Indicates the receipt of the radio signal On = during radio communication Off = no radio communication		It indicates functioning of the pellet feed motor Off = pellet feed motor deactivated On = pellet feed motor active
	It indicates functioning of the fumes motor. Off = flue gas motor deactivated On = flue gas motor active Flashing = breakdown (contact the after-sales service)		It indicates weekly programming functioning Indicator on = Weekly programming active Indicator off = Weekly programming not active Flashing = "delayed switch-off" function is active
	It indicates functioning of the tangential fan (where present) Off = not working On = working Flashing = motor at minimum		Indicates the stove modulation On = the stove is working at the set power Off = the power at which the stove is working differs from the set power and the stove is modulating (for various reasons)
	Indicates the contact of the additional external thermostat Flashing with closed contact: the additional thermostat external contact is closed and the STBY function is activated Flashing with open contact: the additional thermostat external contact is open and the STBY function is activated		Indicates the presence of an alarm. On: indicates the presence of an alarm Off: indicates the absence of alarms Flashing: indicates the deactivation of the depression sensor.
			indicates the water temperature status On = the T° read by the probe exceeds the set temperature Off = the T° read by the probe is lower than the set temperature
			It indicates pump functioning off = pump deactivated on = pump active flashing = the safety is active (H2O temperature > 85°C)
If the display is not used for one minute, it will go to ECO mode (the brightness is lowered to minimum automatically). By pressing any key, the original brightness returns.			

Extraflame has an optional additional board (code 9278286) that allows the boiler the following further functions when managing the system. The table below indicates the various possibilities that the optional can offer.

DHW Storage Management	*
Puffer Management	*
3 heating areas	*
Instant DHW option	*
Puffer pump or 4th heating area management	*
Anti-legionella management for DHW storage	*
DHW storage chrono management	*
Auxiliary output management and control	*

10. FUNCTIONING CYCLE

10.1. BASIC INSTRUCTIONS

The following recommendations must be followed the first times the stove is ignited:

- ❖ It is possible that slight odours are produced due to the drying of the paints and silicones used. Do not remain in the environment for long periods.
- ❖ Do not touch the surfaces as they could still be unstable.
- ❖ Air the room well several times.
- ❖ The hardening of the surfaces is terminated after several heating processes.
- ❖ This appliance must not be used to burn waste.

10.2. IGNITION

ATTENTION!!!
DO NOT USE ANY INFLAMMABLE LIQUIDS FOR IGNITION
DO NOT ALLOW THE BAG OF PELLETS TO COME INTO CONTACT WITH THE BOILING HOT STOVE DURING THE FILLING PHASE
IN THE EVENT OF CONTINUOUS NO IGNITION, CONTACT AN AUTHORISED TECHNICIAN

Before igniting the stove, the following points must be verified:

- ❖ the feed-box must be full of pellets
- ❖ the combustion chamber must be clean
- ❖ The burn pot must be completely free and clean
- ❖ check the hermetic closure of the fire door and the ash drawer
- ❖ make sure the power supply cable is connected correctly

The bipolar switch in the rear right part must be positioned on 1

Press the key for 3 seconds. Once the stove has been ignited, it will pass to start-up in order to go to normal conditions and then normal functioning.
If the machine has not ignited, the **NO IGNITION** alarm occurs.
In the event of the alarm due to no ignition:

- ❖ wait for the machine to cool down
- ❖ clean the burn pot
- ❖ Press the key for 3 seconds.

10.3. WORK

Once the machine has been ignited, the machine starts to work.

Regulate the desired water temperature using the key.

Set the functioning power (from 1 to 5) using the key.

ATTENTION!!!
The lid of the pellet container must always be closed. It must only be opened during the fuel feeding phase.
The bags of pellets must be kept at at least 1.5 metres from the stove.
It is recommended that the feed-box is always half full.
Make sure the appliance is off before filling the pellet tank.

The appliance controls the water temperature through a probe installed as per standard, which modulates machine power until the set point set is reached. Once the temperature set has been reached, the machine will work at minimum. If the water temperature exceeded the factory pre-set parameters the machine will go t **H OFF** status and switch off.
During the "**H OFF**" status, the machine performs all of the switch-off phase, however, leaving the pump active. If the water temperature drops, exceeding the pre-set parameters, the machine will switch back on.
Nota bene: the general times of the various functioning status are variable on the basis of the type of system and on the basis of the parameters set.

10.4. PUMP FUNCTIONING

The pump activates water circulation when the temperature of the water inside the stove reaches approx. 60°C. As the pump always functions above 60°, an always-open heating area is recommended to make product functioning homogenous, avoiding overheating blocks. Normally this area is defined "Safety zone".

10.5. SWITCH-OFF

Switch-off can take place manually by pressing key for three seconds, automatically (due to a control programmed from the utility in CHRONO mode), due to a contact of an additional external thermostat satisfied or H OFF. i.e. temperature of the water reached and exceeded.

When the operation has been performed, the appliance automatically enters the switch-off phase, blocking the supply of pellets; Display will show "OFF".
The flue gas exhaust motor will remain on until the stove temperature has dropped below the factory parameters.

11. ADDITIONAL THERMOSTAT

N.B. : Installation must be performed by an authorised technician

It is possible to thermostat a room adjacent to the room where the stove is positioned: just connect a thermostat following the procedure described in the next point (it is recommended to position the optional mechanical thermostat at a height of 1.50m from the ground).
The STBY function is always active from the factory and the STBY clamp leaves jumpered (contact closed).

11.1. ADDITIONAL THERMOSTAT FUNCTIONING WITH STBY ACTIVE

When the contact or external thermostat is not satisfied (open contact/temperature reached), the stove will switch off. As soon as the contact or external thermostat passes to the "not satisfied" status (closed contact/temperature to reach) it will re-ignite, after the boiler has cooled down.
Nota bene: stove functioning depends on the temperature of the water inside the same and relative factory restrictions set. If stove is in H OFF (water temperature reached), any additional contact or thermostat request will be ignored.

11.2. ADDITIONAL THERMOSTAT INSTALLATION

- ❖ Switch the appliance off using the master switch positioned on the rear of the stove.
- ❖ Remove the plug from the socket.
- ❖ Refer to the electrical layout to connect the two thermostat cables onto the relative clamps positioned don the rear of the machine, one is red and the other black (STBY clamp). The STBY and AUX clamps can be noted in the image below. Every model can have a different position of the relative clamps in the rear of the machine. The image is given as an example.

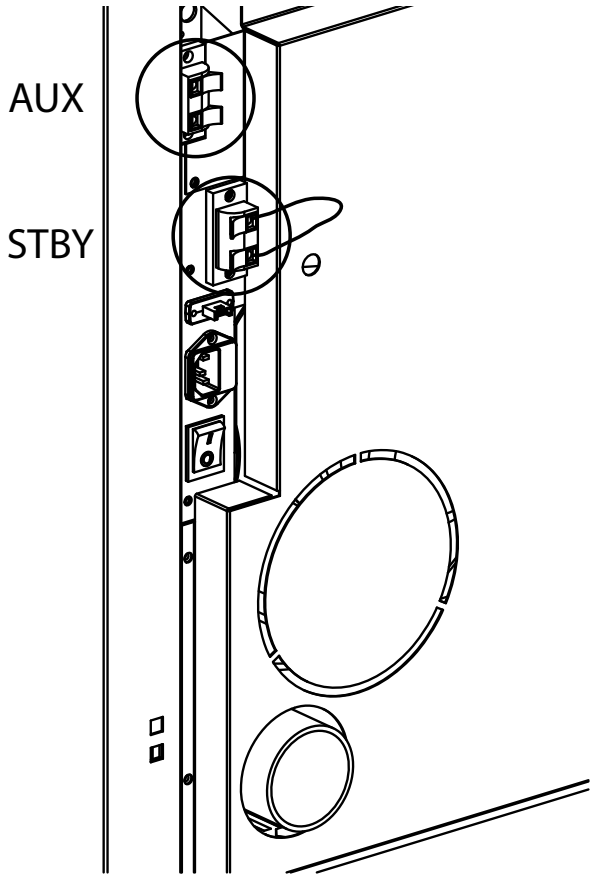


figure 14

12. AIR DISCHARGE FUNCTION

This function allows to discharge any air present in the product. **The product must be in OFF status in order to activate the function.**

Controls procedure

- ❖ Press the ⏻ and + − keys together on the "+" symbol
- ❖ enter the password 77 keeping the "+" symbol of the + − key pressed
- ❖ confirm the password by pressing the 📖 key once
- ❖ To escape the function (that would have duration of 60 minutes), switch the product off and then back on again or press the ⏻ key.

13. MENU

MENU				FUNCTION
DISPLAY D1 SCROLLING TEXT			DISPLAY D2 VALUE	
SET TEMPERATURE	**SET H2O**		**65°C...80°C**	Boiler water T° regulation
SET REGULATIONS	**ENABLE CHRONO**		**ON/OFF**	Chrono activation/deactivation
	PELLET REGULATION		**-30...+20**	Selecting the percentage of pellet feed
STATUS	**STOVE STATUS**	**ST1...ST10**	**VALUE**	status of the value
USER MENU	**SET CLOCK**	**DAY**	**MON...SUN**	Setting the day of the week
		HOURS	**00...24:**	Adjustment of the hour
		MINUTES	**:00...59**	Adjustment of the minutes
		DATE	**1...31**	Adjustment of the date
		MONTH	**1...12**	Adjustment of the month
		YEAR	**00...99**	Adjustment of the year
	SET CHRONO	**START - PRG1**	**OFF - 00:00**	Time 1st ignition
		STOP - PRG1	**OFF - 00:00**	Time 1st switch-off
		MONDAY PRG1 OFF ...SUNDAY PRG1 OFF	**ON/OFF**	Ignition/switch-off consents for various days
		SET PRG1	**07 - 35**	Setting room temperature for the 1rd time span
		START - PRG2	**OFF - 00:00**	Time 2st ignition
		STOP - PRG2	**OFF - 00:00**	Time 2st switch-off
		MONDAY PRG2 OFF ...SUNDAY PRG2 OFF	**ON/OFF**	Ignition/switch-off consents for various days
		SET PRG2	**07 - 35**	Setting room temperature for the 2rd time span
		START - PRG3	**OFF - 00:00**	Time 3st ignition
		STOP - PRG3	**OFF - 00:00**	Time 3st switch-off
		MONDAY PRG3 OFF ...SUNDAY PRG3 OFF	**ON/OFF**	Ignition/switch-off consents for various days
		SET PRG4	**07 - 35**	Setting room temperature for the 3rd time span
		START - PRG4	**OFF - 00:00**	Time 4st ignition
		STOP - PRG4	**OFF - 00:00**	Time 4st switch-off
		MONDAY PRG3 OFF ...SUNDAY PRG3 OFF	**ON/OFF**	Ignition/switch-off consents for various days
		SET PRG4	**07 - 35**	Setting room temperature for the 4rd time span
	LANGUAGE	**ITAL - ENGL - DEUT - FRAN - ESPA**		
TECHNICIAN MENU	The following menu is reserved for the technical after-sales service			

13.1. SET TEMPERATURE

This set allows to regulate the temperature of the water in the boiler, with a range from 65°C to 80°C.

procedure

Press the key from the main screen.

Exit by pressing the key.

13.2. SET REGULATIONS

The menu allows to activate or deactivate the Chrono and regulate the flow of pellets.

13.2.1. ENABLE CHRONO

procedure

Once the desired chrono time periods are programmed, the function must be activated.

- ❖ press key
- ❖ press the key until **SET REGULATIONS** is displayed.
- ❖ Press key to access the menu
- ❖ press the key to activate the chrono (**ON**) or deactivate it (**OFF**)
- ❖ to exit and memorise, press the key several times

Nota bene: When the weekly programmer is active, the LED of the relative icon will switch-on on the control board.

13.2.2. PELLET REGULATION

The following menu allows to increase or decrease the flow of pellets during product functioning, modifying the pellet feed as a percentage. If the stove has functioning problems owing to the quantity of pellets, adjust pellet feeding directly from the control board. The problems correlated to the amount of fuel can be divided into 2 categories:

NO FUEL

- ❖ the boiler can never develop a suitable flame, tending to remain very low even at high powers.
- ❖ at minimum power the boiler tends to almost switch-off taking the stove into "**NO PELLETS**" alarm condition.
- ❖ when the "**NO PELLETS**" alarm is displayed, there may be non-burned pellets inside the burn pot.

EXCESS FUEL:

- ❖ it develops a very high flame even at low powers
- ❖ the burn pot tends to become encrusted, blocking the holes for air intake due to the excessive pellet feed, as it is only burned partially.

If the problem occurs after only a few months working, check that routine cleaning stated in the stove booklet, has been carried out correctly.

The regulation to be performed is a percentage. Therefore a modification of this parameter will lead to a proportional variation of all stove feeding speeds.

procedure

Once the chrono is programmed, activate the function.

- ❖ Press key to access the menu
- ❖ press the key to select **PELLET**
- ❖ regulate the relative value from the key, pressing the "+" or "-" symbol repeatedly.
- ❖ Confirm the selection using the key.
- ❖ Press the same key several times to exit the menu completely.

13.3. STATUS

The menu allow to display the boiler status

procedure

- ❖ press the and keys together on the "**-**" symbol
- ❖ the synoptic will show **STATUS**
- ❖ a key is given below

(st0= t° fumes, st1= auger, st2= fumes motor revs, st3= minutes, st4= t° H2O, st5= flow, st6= real power, st7= t° inlet air, st8= minutes for cleaning, st9= mechanical pressure switch status, stA= H2O pressure switch status)

13.4. USER MENU

13.4.1. SET CLOCK

This menu allows to adjust the clock and the date.

procedure

- ❖ from the OFF status, press the key
- ❖ The stove will show **SET TEMPERATURE**
- ❖ Press the key several times until the **USER MENU** is displayed
- ❖ Press the key, the stove will display **SET CLOCK**
- ❖ Press the key, the stove will show **DAY,** press the key to regulate the exact day (from Monday to Sunday).
- ❖ Press the key , the display will show **HOURS,** press the

key to regulate the exact hour.

❖ Press the key, the stove will show **MINUTES,** press the key to regulate the minutes. For the other values, continue as indicated above, consulting the table below.

SET CLOCK	
day	Mon, Tue, Wed, ...Sun
hours	0...23
minutes	00...59
date	1...31
month	1...12
year	00...99

13.4.2. SET CHRONO

The chrono allows to program 4 time spans within a day to use every day of the week. The switch-on and switch-off time can be set in every time span. along with the days of use of the programmed time span and the desired H2O temperature.

The following table gives all weekly programmer function parameters.

D1	D2	REGULAT. KEYS	CONFIRM KEY
START - PRG1	OFF - 00:00		
STOP - PRG1	OFF - 00:00		
MONDAY PRG1 OFF. ..SUNDAY PRG1 OFF	ON/OFF		
SET PRG1	65°C- 80°C		
START - PRG2 00:10	OFF - 00:00		
STOP - PRG2 00:10	OFF - 00:00		
MONDAY PRG2 OFF ...SUNDAY PRG2 OFF	ON/OFF		
SET PRG2	65°C- 80°C		
START - PRG3 00:10	OFF - 00:00		
STOP - PRG3 00:10	OFF - 00:00		
MONDAY PRG3 OFF ...SUNDAY PRG3 OFF	ON/OFF		
SET PRG3	65°C- 80°C		
START - PRG4 00:10	OFF - 00:00		
STOP - PRG4 00:10	OFF - 00:00		
MONDAY PRG4 OFF ...SUNDAY PRG4 OFF	ON/OFF		
SET PRG4	65°C- 80°C		

Let's suppose that the weekly programmer function is to be used and 2 time periods are to be used in the following way:
1st time span: from 08:00 to 12:00 every day of the week excluding Saturday and Sunday
2nd time span: from 15:00 to 22:00 only Saturday and Sunday
3rd time span: not used
4th time span: not used

Let's set the weekly programmer.

procedure

❖ Press the key, shift using the key until display D2 shows "**USER MENU**"

❖ Successively press the key, **SET CLOCK** will appear.

❖ Press the key until **SET CHRONO** appears.

❖ To enter programming, press .

FIRST TIME SPAN SWITCH-ON TIME SETTINGS

❖ Use buttons buttons to set "08:00", which corresponds to the ignition time of the 1st time period.

❖ To confirm and continue programming, press the button. (Press the button in the "-" symbol to go back to the previous parameter).

SETTING FIRST TIME SPAN SWITCH-OFF TIME

Use the buttons to set the time "12:00", which corresponds to the switch-off time of the 1st time span. The **STOP PRG1** text will appear followed by the time set

❖ To confirm and continue programming, press the button. Press the button in the "-" symbol to go back to the previous parameter.

ACTIVATION OF THE TIME SPAN FOR SELECTED DAYS AS PER EXAMPLE

Activate the first time span for every day of the week except Saturday and Sunday. To do this use the , keys in the following way:

❖ key: scrolls the various days, the scrolling text will appear with the day of the week, followed by **OFF**

❖ key: enables/disables (**ON/OFF**) the 1st time period for that day

❖ to change day, press the key

<u>The table below indicates the activations and deactivations of the week for the first time span</u>

Day	Initial value		Final value	
MONDAY	**OFF**	**OFF** to **ON** and vice versa	**ON** (active time span)	Go to next day
TUESDAY	**OFF**	**OFF** to **ON** and vice versa	**ON** (active time span)	Go to next day
WEDNESDAY	**OFF**	**OFF** to **ON** and vice versa	**ON** (active time span)	Go to next day
THURSDAY	**OFF**	**OFF** to **ON** and vice versa	**ON** (active time span)	Go to next day
FRIDAY	**OFF**	**OFF** to **ON** and vice versa	**ON** (active time span)	Go to next day
SATURDAY	**OFF**	**OFF** to **ON** and vice versa	**OFF** (time span deactivated)	Go to next day
SUNDAY	**OFF**	**OFF** to **ON** and vice versa	**OFF** (time span deactivated)	Go to next day

SETTING THE TEMPERATURE FOR THE FIRST TIME SPAN

- ❖ press the key, **SET PROG1** will appear followed by a temperature
- ❖ regulate the temperature using the keys, **SET PRG1** will appear followed by the temperature set
- ❖ press the key to pass to the second time span

At this point, the second time span must be programmed

SETTING SECOND TIME SPAN SWITCH-ON TIME

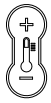
- ❖ Use the buttons to set the time "15:00", which corresponds to the switch-on time of the 2nd time span. The **START PRG2** scrolling text will appear followed by the time set
- ❖ To confirm and continue programming, press the button. Press the button in the "-" symbol to go back to the previous parameter.

SETTING SECOND TIME SPAN SWITCH-OFF TIME

Use the buttons to set the time "22:00", which corresponds to the switch-off time of the 2nd time span. The **STOP PRG2** text will appear followed by the time set

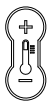
- ❖ To confirm and continue programming, press the button. Press the button in the "-" symbol to go back to the previous parameter.

ACTIVATION OF THE TIME SPAN FOR SELECTED DAYS AS PER EXAMPLE

Activate the second time span for Saturday and Sunday. To do this use the ,  keys in the following way:

- ❖ key: scrolls the various days, the scrolling text will appear with the day of the week, followed by **OFF**
- ❖ key: enables/disables (**ON/OFF**) the 1st time period for that day
- ❖ to change day, press the key

SETTING THE TEMPERATURE FOR THE SECOND TIME SPAN

- ❖ press the key, **SET PROG2** will appear followed by a temperature
- ❖ regulate the temperature using the  keys, **SET PRG2** will appear followed by the temperature set
- ❖ press the key to pass to the second time span

Exit programming completely by pressing the key several times.

ACTIVATION/DEACTIVATION OF THE CHRONO

- ❖ Press the key for three seconds, **SET TEMPERATURE** will appear
- ❖ Press the key several times until **SET REGULATIONS** is displayed
- ❖ Press the key once, **ENABLE CHRONO** scrolling text will appear
- ❖ Press the key once to activate (ON) or deactivate (OFF) the chrono
- ❖ memorise and exit pressing the key several times

The manual controls, from the display or remote control, always remain priority with respect to programming.

13.4.3. CHRONO MENU TABLE

The following table gives all weekly programmer function parameters.

MENU	DISPLAY		REGULATION KEYS	CONFIRMATION KEY
SET CHRONO	ENABLE CHRONO	OFF		
	START - PRG1	OFF - 00:00		
	STOP - PRG1	OFF - 00:00		
	MONDAY PRG1 OFF ...SUNDAY PRG1 OFF	ON/OFF		
	SET PRG1	07 - 35		
	START - PRG2 00:10	OFF - 00:00		
	STOP - PRG2 00:10	OFF - 00:00		
	MONDAY PRG2 OFF ...SUNDAY PRG2 OFF	ON/OFF		
	SET PRG2	07 - 35		
	START - PRG3 00:10	OFF - 00:00		
	STOP - PRG3 00:10	OFF - 00:00		
	MONDAY PRG3 OFF ...SUNDAY PRG3 OFF	ON/OFF		
	SET PRG3	07 - 35		
	START - PRG4 00:10	OFF - 00:00		
	STOP - PRG4 00:10	OFF - 00:00		
	MONDAY PRG4 OFF ...SUNDAY PRG4 OFF	ON/OFF		
	SET PRG4	07 - 35		

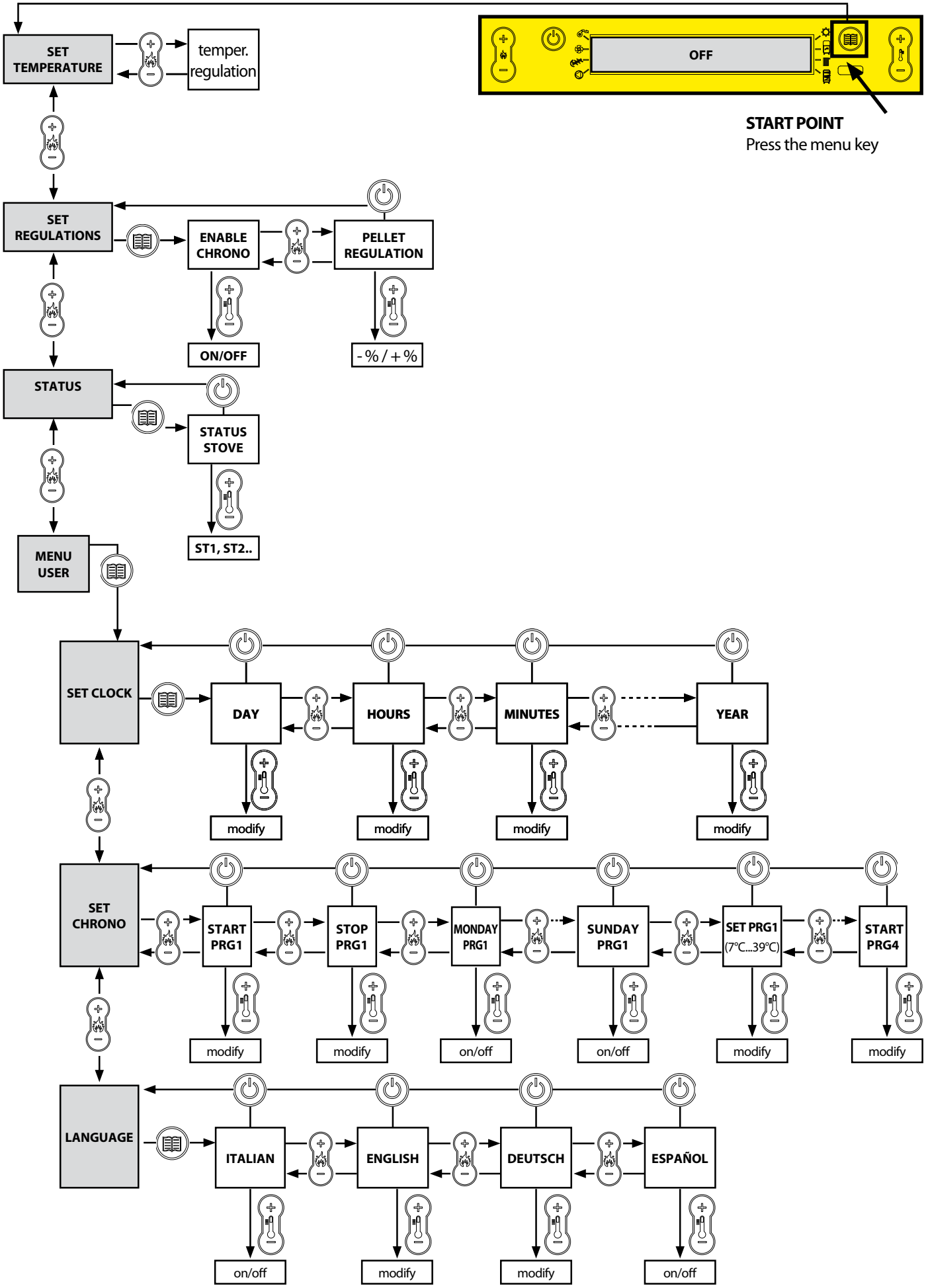
13.4.4. LANGUAGE

The menu allows to set the language.

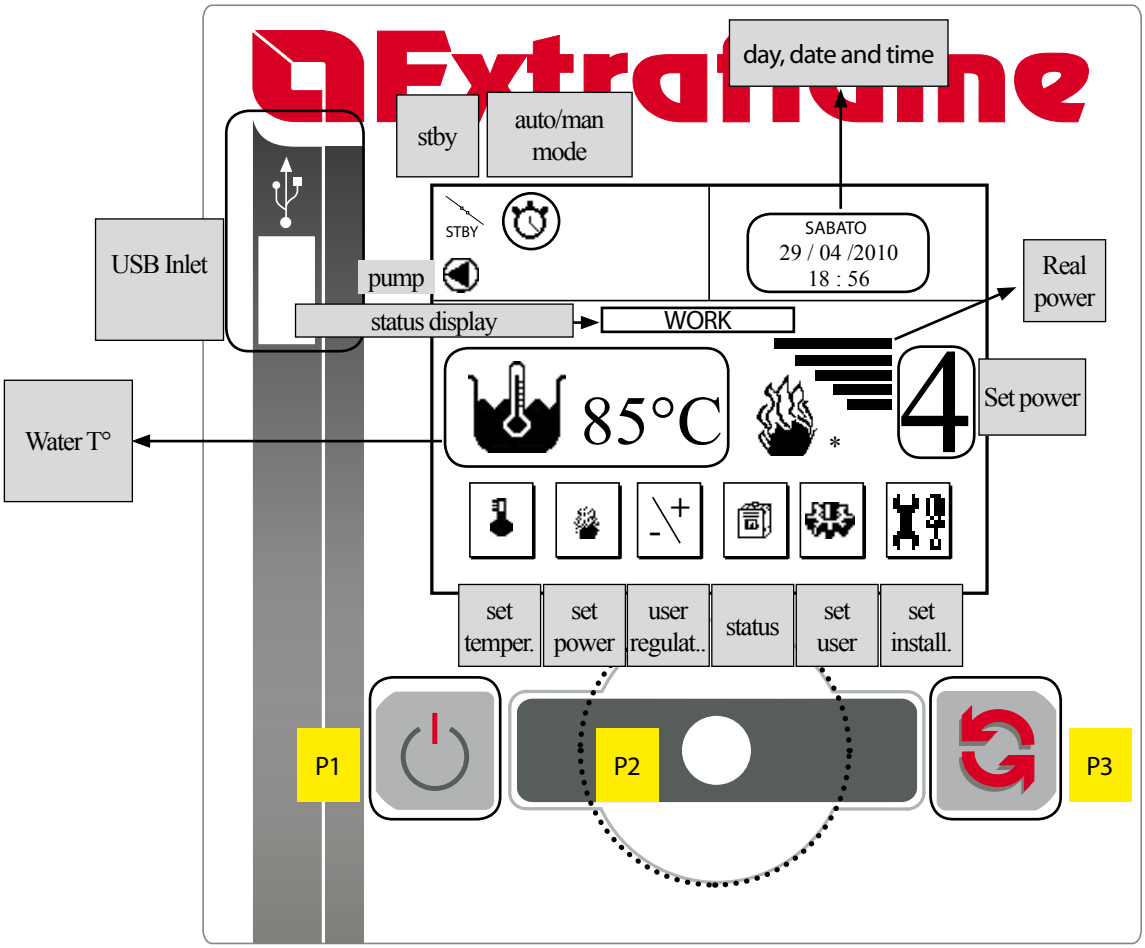
procedure

- ❖ Press the key, shift using the key until display D2 shows "**USER MENU**"
- ❖ Successively press the key, **SET CLOCK** will appear.
- ❖ Press the key until **LANGUAGE** appears.
- ❖ enter the sub-menu by pressing key
- ❖ select the language using the key
- ❖ memorise and exit pressing the key several times

14. MENU DIAGRAM



15. LP30 CONTROL BOARD AND PRODUCT FUNCTIONALITY



P1 Boiler ignition or switch-off key

P2 Encoder (wheel), by turning, select the different icons on the display, by pressing enter selection

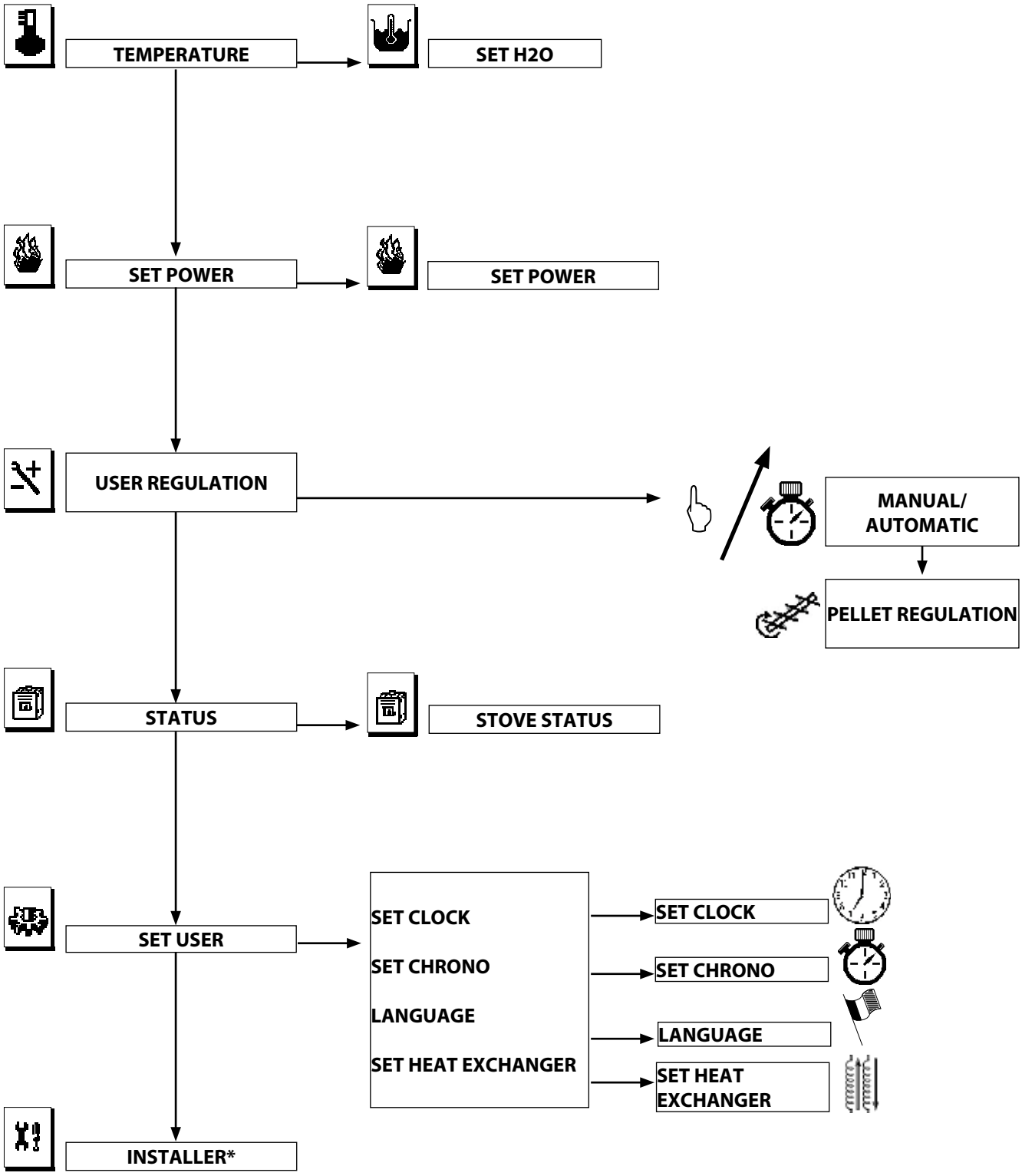
P3 Multiple-function key (advancement through menus etc)

*The flame icon is not present in the OFF, START, BURN POT CLEANING, FINAL CLEANING, ALARM, RE-START STBY status
*Flashes in IGNITION mode
*Fixed in START-UP and WORK mode. During the WORK phase it displays the flame with real work power

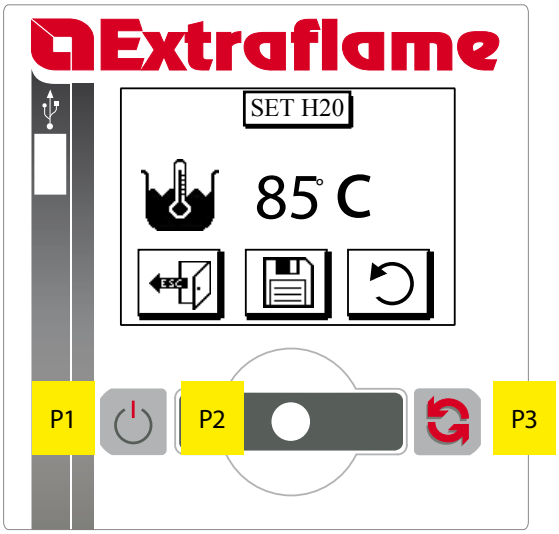
Extraflame has an optional additional board that allows the boiler the following further functions when managing the system. The table below indicates the various possibilities that the optional can offer.

DHW Storage Management	*
Puffer Management	*
3 heating areas	*
Instant DHW option	*
Puffer pump or 4th heating area management	*
Anti-legionella management for DHW storage	*
DHW storage chrono management	*
Auxiliary output management and control	*

16. LP30 MENU STRUCTURE

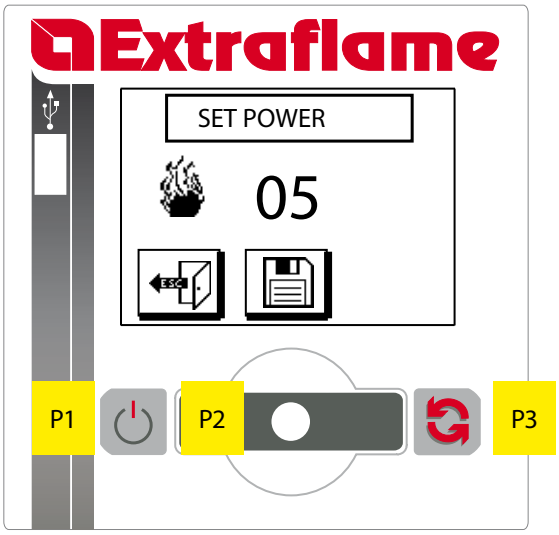


16.1. TEMPERATURE REGULATION



- From the main screen, turn P2 to select the icon
- Press P2 to confirm
- Turn P2 to regulate the temperature
- Confirm and memorising by pressing P2
- To exit without memorising, press key P1

16.2. POWER REGULATION



- From the main screen, turn P2 to select the icon
- Press P2 to confirm
- Turn P2 to regulate the power
- Confirm and memorising by pressing P2
- To exit without memorising, press key P1

16.3. USER REGULATIONS MENU

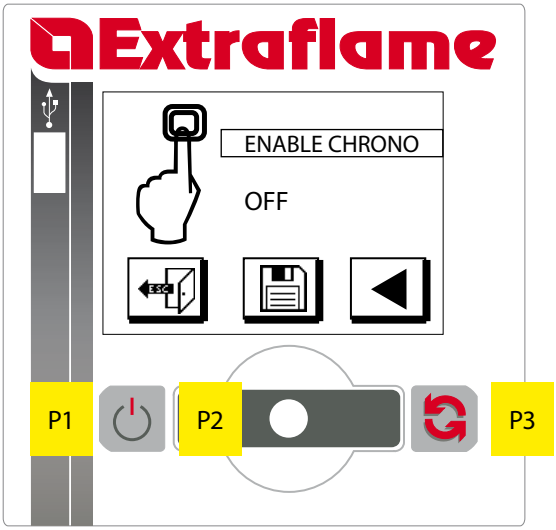
The set user menu offers the following possibilities

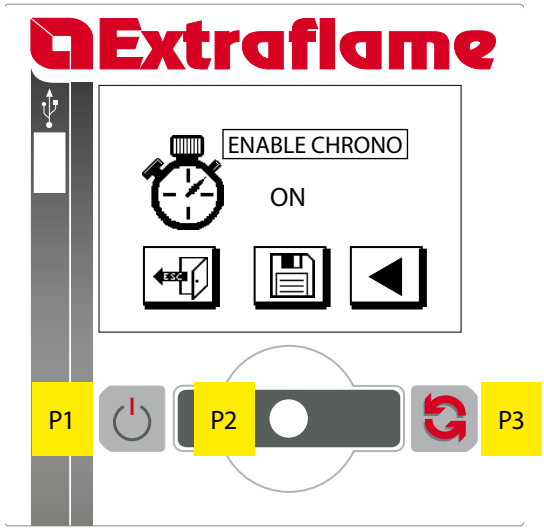
- automatic/manual mode: allows enabling/disabling of the chrono inside the boiler
- pellet regulation: allows pellet regulation

16.4. AUTOMATIC/MANUAL MODE /

The automatic mode allows to ignite the boiler and switch it off, following the programming set by the user. To regulate the time periods, see the CHRONO REGULATION paragraph.

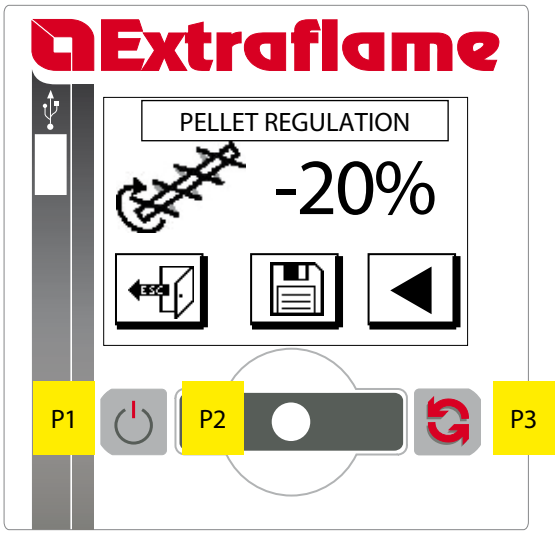
- From the main screen, turn P2 to select the icon
- Press P2 to confirm
- Turn P2 to take chrono enabling to ON
- Confirm and memorising by pressing P2
- to exit without memorising, press key P1





16.5. PELLET SETTING

The boiler allows regulation of the pellets via the relative menu. Considering the different types of pellets on the market, the user can increase or decrease the amount of pellets as a percentage.



- From the main screen, turn P2 to select the icon
- Press P2 to confirm and successively press P2 again to select

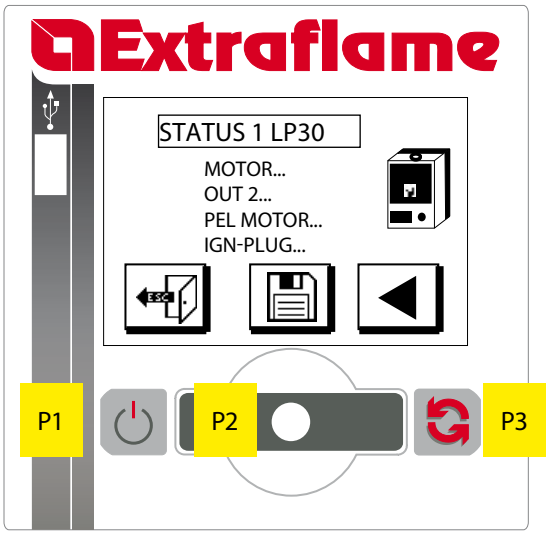
PELLET REGULATION

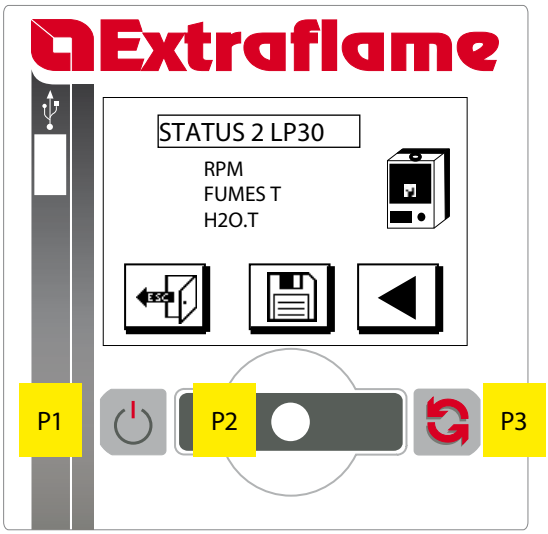
- Turn P2 to modify the parameter as a percentage
- Confirm and memorising by pressing P2
- to exit without memorising, press key P1

16.6. STATUS MENU

The status menu is used to display the status of the inputs and outputs in the board

- From the main screen, turn P2 to select the icon
- Press P2 to confirm (display of STATUS 1 screen)
- Press P2 again to display STATUS 2 screen
- To go back, press P3
- To exit, press key P1





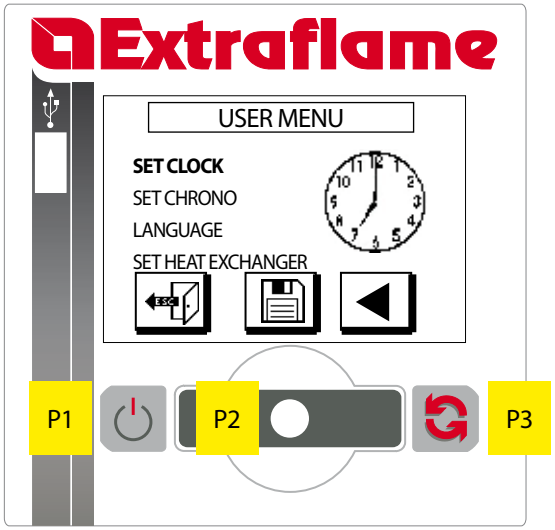
16.7. SET USER

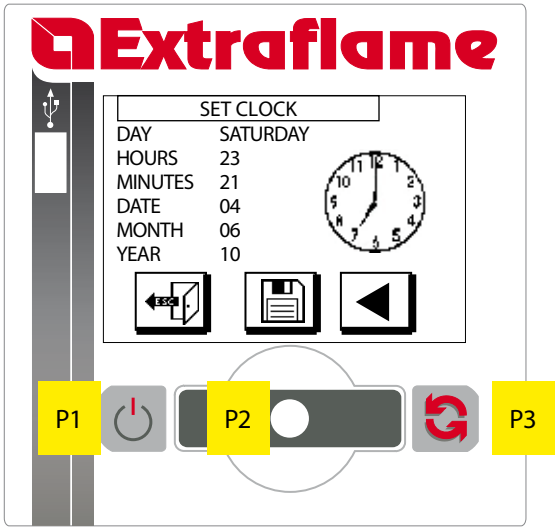
The set user menu offers the following possibilities:

- set clock: allows regulation of the time and date
- set chrono: allows to program 4 functioning time periods for the boiler, with automatic switch-ons and switch-offs and setting of the desired water temperature for every time period.
- language: setting the desired language (Italian, English, French, German, Spanish)
- set heat exchanger: programming of the start and end times of the automatic cleaning of the heat exchangers.

16.7.1. SET CLOCK

- From the main screen, turn P2 to select the icon
- Press P2 to confirm
- Turn P2 to select "**SET CLOCK**"
- Confirm, pressing P2
- Turn P2 to select the desired parameter
- Press P2 to enter modification mode
- Turn P2 to modify the value
- Press P2 to confirm and exit
- If you wish to exit without memorising, press key P1



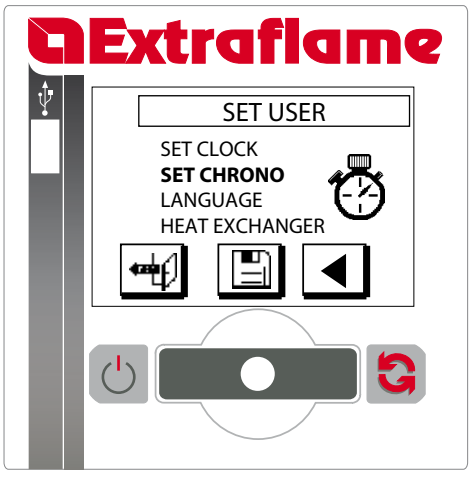


16.7.2. CHRONO REGULATION

Through regulation of the chrono, i.e. automatic mode, the boiler can ignite and switch off in automatic mode. The chrono has absolute priority over every control, therefore this factor must be considered. Four time periods can be programmed. By default all of the time periods are in OFF

EXPLANATION	SCREEN	
First time period ignition time	START PRG1	00:00
First time period switch-off time	STOP PRG1	00:00
day allowed or not (on - off)	MONDAY PRG1	ON
day allowed or not (on - off)	TUESDAY PRG1	OFF
day allowed or not (on - off)	WEDNESDAY PRG1	OFF
day allowed or not (on - off)	THURSDAY PRG1	OFF
day allowed or not (on - off)	FRIDAY PRG1	OFF
day allowed or not (on - off)	SATURDAY PRG1	OFF
day allowed or not (on - off)	SUNDAY PRG1	OFF
setting water t°	SET PRG1	...

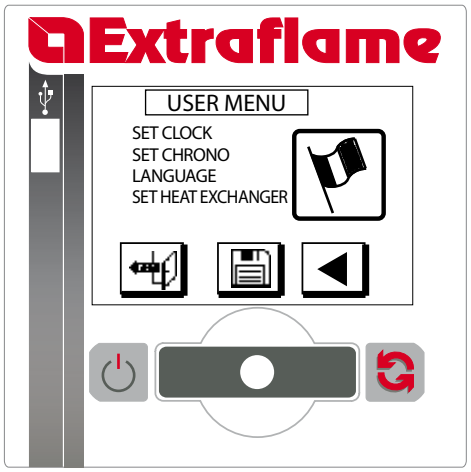
- Turn P2 to select the icon
- Press P2 to confirm
- Turn P2 to select "**SET CHRONO**"
- Confirm, pressing P2
- Turn P2 to select the desired parameter
- Press P2 to enter modification mode
- Turn P2 to modify the value
- Press P2 to confirm and exit
- If you wish to exit without memorising, press key P1



16.7.3. SET LANGUAGE MENU

The boiler allows to set the following languages: Italian, English, French, German and Spanish. ITALIAN is the default setting

- Turn P2 to select the icon
- Press P2 to confirm
- Turn P2 to select "**LANGUAGE**"
- Confirm, pressing P2
- Turn P2 to select the desired parameter
- Press P2 to enter modification mode
- Turn P2 to modify the value
- Press P2 to confirm and exit
- If you wish to exit without memorising, press key P1



17. LP14_20_30 BOILER CLEANING

(Some images could be offset from the original model).
Maintenance operations guarantee correct functioning of the product through time. Failure to comply with these operations can jeopardise the safety of the product. The cleaning operations must be performed when the stove is completely cold.

17.1. BURN POT CLEANING

The burn pot is cleaned via a mechanical system at pre-fixed intervals automatically by the boiler. The figure below shows the burn pot. The company recommends to remove any ash residue using a suction device, at least once every two days.

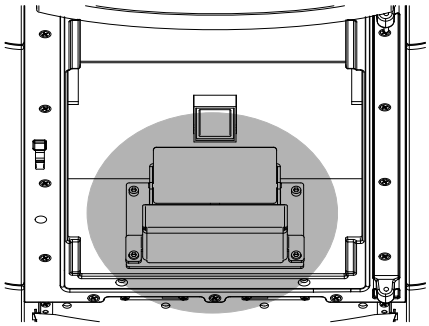


figure 15

17.2. DOOR GASKET AND ASH DRAWER

The gaskets guarantee the tightness of the boiler and its consequent good functioning.
These must be checked regularly: if they should be worn or damaged they must be replaced immediately.
These operations must be carried out by an authorised technician.
N.B. For correct functioning, the boiler must undergo routine maintenance by an authorised technician, at least once a year.
If the power supply cable is damaged, it must be replaced by the after-sales service or by a similarly qualified person, so as to avoid al risks.

LP14_20

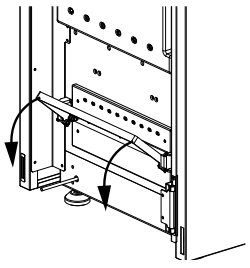


figure 16

LP14_20

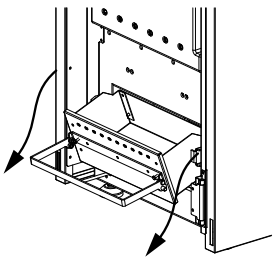


figure 17

With machine off, open the ash drawer to empty the content. The frequency of emptying the ash drawer will be proportional to the use of the product. Lp30 has 3 drawers.

LP_30

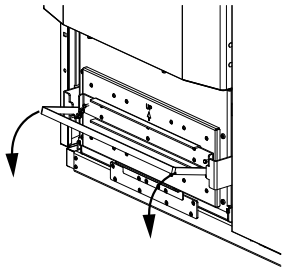


figure 18

LP_30

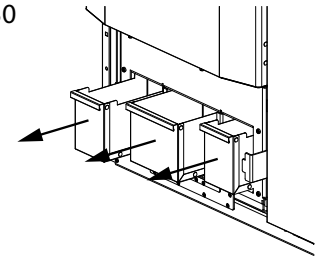


figure 19

17.3. CONNECTION TO THE FLUE AND CLEANING OF THE SAME

Suck and clean the pipe that leads to the flue yearly or anytime that it is necessary. If there are horizontal tracts the residues must be removed before they obstruct smoke passage. **NON-CLEANING jeopardises safety.**
Maintenance operations guarantee correct functioning of the product through time. Failure to comply with these operations can jeopardise the safety of the product.

18. DISPLAYS		
Display	**Reason**	**Solution**
START	The start phase is in progress	-
PELLET FEED	the continuous feeding of the pellets during the ignition phase is in progress	-
IGNITION	The boiler is in ignition phase	-
START-UP	the work preparation phase is in progress	-
WORK	the normal working phase is in progress, the boiler is working at the power set	-
BURN POT CLEANING	the automatic burn pot cleaning is in progress	-
FINAL CLEANING	the final cleaning is in progress	-
MODULATION	the boiler is working at minimum power	-
STAND - BY	boiler waiting for re-ignition due to an external thermostat	the boiler will only re-start when the external thermostats makes a request
COOL. STDBY-BLACK OUT	the boiler is cooling after a power cut.	once cooling is completed it will automatically ignite
HOFF	boiler in stand-by for re-ignition because the temperature of the water has exceeded the parameters set	as soon as the water temperature drops below the pre-established parameters, the boiler will switch back on
ANTI-FREEZE	the anti-freeze function is in progress as the H2O t° is below the factory set threshold	the pump is active until the water reaches the pre-set factory parameter
ANTILOCK	If the boiler has remained in the Off status for at least 96 hours, the pump starts to function, so that blocking does not occur.	the pump activates for a brief period, in a way to prevent blockage of the same.
EXCH. BLOCK	indicates the cleaning block of the exchanger	contact after-sales centre
AUTO BLOW	the automatic blow is in progress	-

19. ALARMS		
FUMES FAILURE	Flue gas motor fault	**contact after-sales centre**
FUMES PROBE	Fumes probe failure.	**contact after-sales centre**
HOT FUMES	High flue gas temperature	check the calibration of pellet regulation. If this cannot be solved, contact an authorised technician
NO FLOW ALARM	The door is not closed correctly. The ash drawer is not closed correctly. The combustion chamber is dirty. The flue exhaust or air supply pipe is blocked.	Check hermetic door closure. Check hermetic closure of the ash drawer. Check cleanliness of the fumes pipe and the combustion chamber. Check cleanliness if the air supply pipe and the flow sensor
NO IGNITION	The pellet feed-box is empty. Pellet feed calibration inadequate.	Check for the presence of pellets in the feed-box. Regulate the pellet flow Check the procedures described in the "*Ignition*" chapter.
BLACK-OUT NO IGN.	No current during the ignition phase.	Take the boiler to **OFF** conditions using key 1 and repeat the procedure described in the "Ignition" chapter.
NO PELLETS	The pellet feed-box is empty. No pellet feed. The motor reducer does not feed pellets.	Check for the presence of pellets in the feed-box. Adjust pellet flow (see "*Pellet feed adjustment*").
DEPR ALARM	The door is not closed correctly. The ash drawer is not closed correctly. The combustion chamber is dirty. The flue exhaust pipe is blocked	Check hermetic door closure. Check hermetic closure of the ash drawer. Check cleanliness of the fumes pipe and the combustion chamber. Check the mechanical pressure switch (air side)
DEPR SENSOR DAMAGE	flow sensor faulty sensor disconnected	contact after-sales centre
H2O OVERTEMP	the water in the boiler has exceeded 95°C. Possible air in the system. Insufficient circulation. No or inadequate safety zone. Possible pump anomaly.	contact after-sales centre
MINIMUM PRESSURE ALARM	the system pressure read by the pressure switch is too low. Possible presence of air in the system. Possible lack of water or leaks due to anomalies in some system component.	contact after-sales centre
TRAPDOOR BLOCK	The automatic cleaning of the burn pot results blocked.	Switch off the machine, wait for complete cooling and repeat the ignition cycle. If the problem persists, the reset operations must be carried out by an authorised technician.
WATER PROBE	H2O probe failure	contact after-sales centre

20. WARRANTY CONDITIONS

EXTRAFLAME S.p.A., with offices in via dell'Artigiananto 12 Montecchio Precalcino (VI), guarantees this product for 2 (two) YEARS from purchase date for manufacturer and material faults. The warranty becomes void in case the defect of conformity is not filed with the dealer within two months from date of its finding.

The responsibility of EXTRAFLAME S.p.A. is limited to the supply of the appliance, which must be perfectly installed, following the indications contained in the appropriate manuals and books provided with the purchased product and in compliance with the laws in force. **Installation must be performed by qualified staff, under the responsibility of the person entrusting him, who will assume complete responsibility for the definitive installation and consequent good functioning of the product installed. EXTRAFLAME S.p.A. cannot be held responsible for the failure to comply with such precautions.**

WARNING

The warranty is validated on the condition that:

The installation and relative connections of the plant have been carried out by professionally authorised staff in total compliance with the Standard in force (M.D. n.37 dated 22 January 2008), in compliance with the Standards in force, both national and regional, as well as these instructions.
Testing has been carried out by an authorised Extraflame S.p.A. After-Sales Centre, which assume the entire responsibility to have verified that the plant has been realised in compliance with the Standard in force, by professionally qualified staff, in compliance with the Standards in force and to have checked the good functioning of the installed product. Once this has been verified, the After-Sales Centre will supply all the information for its correct use, filling in and delivering a copy of the document which certifies the warranty, undersigned by the client.
EXTRAFLAME S.p.A. assures that all its products are manufactured with top quality materials and with manufacturing techniques which guarantee total efficiency. If during normal use of the product, defective or badly working particulars should be detected, the replacement of such particulars will be free of charge, ex dealer who made the sale.

TERRITORIAL EXTENSION OF THE WARRANTY:

Italian territory

VALIDITY

The warranty is considered valid on the condition that:

21. The purchaser forwards the**inspection report and warranty validation (copy 2)** filled-in completely, within 8 days from the date of validation of the warranty. The purchase date must be validated by the possession of a valid fiscal document issued by the dealer.
22. The appliance is used as prescribed in the instructions manual provided with all products.
23. The boiler is installed, in compliance with the Standards in force with regard to the prescriptions contained in the installation, use and maintenance manual relating to the product, by qualified staff in possession of the legal requisites (M.D. n.37 dated 22 January 2008);
24. The client is in possession of the documentation which certifies its eligibility, filled-in in all its parts:
    a. INSTALLATION REPORT: filled-in by the installer
    b. INSPECTION REPORT AND VALIDATION OF THE WARRANTY: filled-in by the customer, the dealer and an Extraflame S.p.A. authorised after-sales centre.
25. The warranty document, filled-in and accompanied by the purchase fiscal document issued by the dealer, must be kept and shown to staff of the EXTRAFLAME S.p.A. Technical After-sales Service in the event of intervention.

The warranty is not considered valid in the following cases:

26. The warranty conditions described above have not been respected.
27. Installation has not been performed with respect to the Standards in force regarding the provisions described in the manual/book provided with the appliance.
28. Negligence of the customer due to lack of or incorrect maintenance of the product.
29. Presence of electric and/or hydraulic plants that do not comply with the standards in force.
30. Damages deriving from atmospheric, chemical, electro-chemical agents, improper use of the product, modifications and tampering with the product, inefficacy and/or unsuitability of the flue and/or other causes not deriving from the manufacture of the product.
31. Combustion of materials not compliant with the types and quantities indicated in the manual/book supplied
32. All damages caused by transport. It is therefore recommended to carefully check the goods on receipt, immediately informing the dealer of any damage, making a note on the transport document and on the carrier's copy.

EXTRAFLAME S.p.A. is not liable for any damage that can, directly or indirectly, affect persons, objects and pets as a consequence of failure to comply with the prescriptions indicated in this manual/book.
All particulars subject to normal wear are not covered by warranty:
This category includes:

- ❖ The gaskets, all ceramic or toughened glass, coverings and cast iron or Ironker grids, the painted, chrome or gold-plated details, the majolica, the handles and the electric cables.
- ❖ Colour variations, crackles and slight size differences of the majolica parts are not a reason for claims, as they are natural features of the materials themselves.
- ❖ Parts in refractory material
- ❖ Masonry work
- ❖ The system particulars for the production of domestic hot water not supplied by EXTRAFLAME S.p.A. (water products only).
- ❖ The heat exchanger is excluded from the warranty unless an adequate anti-condensate circuit is realised, which guarantees a minimum return temperature of the appliance of at least 55°C (only water products).

Further clauses:
The warranty also excludes any calibration or regulation interventions of the product in relation to the type of fuel or the type of installation.
The warranty is not extended if particulars are replaced.
No compensation will be paid for the time the product is inefficient.
This warranty is valid only for the purchaser and cannot be transferred.

WARRANTY INTERVENTIONS

The request for information must be sent to the dealer.
The warranty intervention envisions the repair of the appliance without any charge, as provided by the law in force.

LIABILITY

EXTRAFLAME S.p.A. does not grant any compensation for direct or indirect damage caused or depending on the product.

LAW COURT

The Vicenza Law Court is elected as the competent court for any disputes.

QUALITY CONTROL

Extraflame®
Riscaldamento a Pellet

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Extraflame reserves the right to change the features and data stated in the following file at any time without forewarning, in order to improve its products.
This manual cannot be considered as a contract for third parties.

This document is available at*www.extraflame.it/support*